

2023 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP 2023)

**Chengdu, China
13-15 November 2023**



**IEEE Catalog Number: CFP2377Y-POD
ISBN: 979-8-3503-0877-8**

**Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2377Y-POD
ISBN (Print-On-Demand):	979-8-3503-0877-8
ISBN (Online):	979-8-3503-0876-1
ISSN:	2766-9564

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

<p>A K-Band Power Amplifier Design Based on 130 Nm SiGe Technology with Gain Over 22.4 dB Operating Up to 120 °C</p> <p style="padding-left: 20px;"><i>Weiyan Gu, Xuyang Lu</i></p> <p>A Wideband GaN MMIC Power Amplifier Based on Non-Uniform Distributed Topology.....</p> <p style="padding-left: 20px;"><i>Aizhen Hu, Yongqing Leng, Tongyao Luan, Kai Wu, Xin Qiu, Xingli Cui</i></p> <p>A 7-13GHz Compact GaN MMIC Power Amplifier with High-Efficiency</p> <p style="padding-left: 20px;"><i>Kai Wu, Yongqing Leng, Aizhen Hu, Qiqi Li, Xin Qiu, Youbo Jing</i></p> <p>Design of 340-GHz On-Chip Power Combiners for InP HBT PAs.....</p> <p style="padding-left: 20px;"><i>Bo Li, Yutong Wang, Feng Lin, Houjun Sun</i></p> <p>Design of Ultra-Low Power Reflective Metasurface Amplifier Element.....</p> <p style="padding-left: 20px;"><i>Bincai Wu, Yuqi Chen, Shilie Zheng, Xiaonan Hui, Xianmin Zhang</i></p> <p>A 6–18 GHz High Power-Handling Switch in GaN Technology</p> <p style="padding-left: 20px;"><i>Qiqi Li, Yongqing Leng, Xin Qiu, Zhengjia Wang, Kai Wu, Youbo Jing</i></p> <p>A Repeater Enabling Small Signal Backscattering Amplification and Forward Harmonic Generation</p> <p style="padding-left: 20px;"><i>Ruiyao Du, Lei Guo, Yangping Zhao, Ke Wu</i></p> <p>A Low-Profile EIA-like Raserber with Ultra-wideband Transmission Band.....</p> <p style="padding-left: 20px;"><i>Wu Weiwei, Li Shixian, Fang Yizhong, Liu Jiaqi, Yuan Naichang</i></p> <p>Microwave Window Directional Radiation Control Based on Metamaterial</p> <p style="padding-left: 20px;"><i>Huajiang Peng, Feng Gao, Shan Tian, Ting Zhang, Jieping Wu, Jiahao Zou, Lie Zhu, Xiaoqing Yang</i></p> <p>Wideband and Polarization Insensitive EM Absorber Using Tightly Coupled Dipole Structure</p> <p style="padding-left: 20px;"><i>Jian Peng, Chao Li, Fei Cheng, Li Wu, Wei-wei Xu, Zhi-jie Liu</i></p> <p>Metasurface with Strip-Shaped Phase Distribution Constructed by Rotation Slots for Backward RCS Reduction</p> <p style="padding-left: 20px;"><i>Boli Su, Junhong Wang</i></p> <p>A Metasurface Enabled Compact Circularly Polarized Conical Horn Antenna.....</p> <p style="padding-left: 20px;"><i>Dongxiang Huang, Yu Chen, Guowei Li, Yuehe Ge, Zhizhang Chen</i></p> <p>Research and Optimization of the GaN HEMT's Gate Spacing from Thermal and Microwave Perspective.....</p> <p style="padding-left: 20px;"><i>Jiuding Zhou, Wenliang Liu, Yang Lu, Yuanfu Zhao, Xiaohua Ma</i></p> <p>MBE-Regrowth Ohmics in AlN/GaN HEMTs with the Rc of 0.09 Ω·mm</p> <p style="padding-left: 20px;"><i>Lingjie Qin, Jiejie Zhu, Jingshu Guo, Siyu Liu, Yuxi Zhou, Mengdi Li, Bowen Zhang, Xiaohua Ma</i></p> <p>GaN Tunneling Hot Electron Transistors with UID-GaN/AlN Emitter Barrier</p> <p style="padding-left: 20px;"><i>Mengdi Li, Jiejie Zhu, Yingcong Zhang, Lingjie Qin, Yuxi Zhou, Bowen Zhang, Sizhi Zheng, Siyu Liu, Jingshu Guo, Xiaohua Ma</i></p>	<p>1</p> <p>4</p> <p>7</p> <p>10</p> <p>13</p> <p>16</p> <p>19</p> <p>22</p> <p>25</p> <p>28</p> <p>31</p> <p>33</p> <p>35</p> <p>38</p> <p>41</p>
---	--

A Gold Bump Flip-Chip Interconnection Structure for Face-up MMIC Assembly in RF Front-end Modules.....	44
<i>Huaiqiang Yu, Jiahong Peng, Xi Wang, Yuting Tan, Peng Wen, Yi Tao, Like Deng, Chuangxin Jiang</i>	
Research on the Surface Morphology of β -Ga ₂ O ₃ films with Different Growth Conditions.....	47
<i>Ying Zhou, Yunlong He, Xiaoli Lu, Zhan Wang, Xianqiang Song, Yang Liu, Xiaohua Ma, Yue Hao</i>	
Epitaxial Lift-Off Derived High Performance Ferroelectric Thin Film Bulk Acoustic Resonator.....	50
<i>Xu Wang, Xiaoli Lu, Zekun Shi, Hanqi Zeng, Huabin Wang, Ye Wang Xiaohua Ma, Yue Hao</i>	
Design of Dual-Band Transparent Vehicle Antenna for Communication and Radar Applications.....	53
<i>Hao Wang, Hui Li</i>	
A Reflector Antenna with Horn-Array Feeding Source for Terahertz Applications.....	55
<i>Yanzheng Chen, Ali Raza</i>	
Multifunctional Metasurface for Flexible Control of Amplitude and Phase in Full Space.....	58
<i>Shi He, Rui Yuan Wu, Hai Long Wang</i>	
A Wide-Angle Triangular-Lattice Programable Metasurface Based on Hexagonal Meta-Elements.....	61
<i>Liang Xu, Qiu Cen Hu, Wei Xiang Jiang</i>	
A Compact 24-30GHz Doherty Power Amplifier with a Flexible T-Type L-C-L Series Combiner and New Power Sensing Method for 5G Communications.....	64
<i>Jingye Zhang, Jiawen Chen, Taotao Xu, Liang Wu, Haoshen Zhu, Wenquan Che, Quan Xue</i>	
A 512-Element Polarization-Switchable Ka-Band Transmit Phased Array for SATCOM Application.....	67
<i>Zhe Cui, Shichao Jin, Haiyong Liu, Feng Gao, Nina Shan, Chunjiao Fei, Dunge Liu, Chang He, Yuqian Yang</i>	
Research and Development of Multistate Spoof Surface Plasmon Polaritons Antennas.....	70
<i>Bian Wu, Haoran Zu</i>	
Design of Dual-Band Omnidirectional Antenna with Improved Pattern Based on Multi-Mode.....	71
<i>Bo-Chuan Jin, Neng-Wu Liu, Zhen-Jun Kang</i>	
A Wideband Circularly Polarized Antenna Based on the Patch Resonator and SIW Cavity.....	74
<i>Huan Yan, Qianwen Liu, Yiming Tang</i>	
A Pattern Reconfigurable Antenna Based on Dielectric Resonator.....	77
<i>Yuerong Liu, Yuandan Dong</i>	
Symmetrically +/-45° Dual-Polarized Rectenna Array for Orthogonally And/or Two-Tone Excited Polarization-Insensitive and Wide-Coverage MPT.....	80
<i>W. L. Zhou, G. X. Zhu, J. C. Wang, H. Zhang</i>	
Design and Fabrication of Non-Volatile Direct Heating RF High-Speed Switch Matrix Based on GeTe Phase Change Material.....	83
<i>Shubing Li, Zhangchen Hou, Jianli Tang, Zhigao Hu</i>	
Overview of Metamaterial-Based Vacuum Electron Devices at UESTC.....	86
<i>Zhaoyun Duan</i>	
Coding Metasurface Combining Absorption and Diffusion for Broadband RCS Reduction.....	89
<i>Xiaoyu Pang, Jiahao Wang, Shenghui Zhao, Yifang Song, Kai Qu, Ke Chen</i>	

A Ka-Band All-Metal Multibeam Antenna Array Fed by Filtering Butler Matrix	92
<i>Sifan Wu, Jianxing Li, Weiyu He, Yuanxi Cao, Sen Yan, Juan Chen</i>	
All-Metal Wide-Angle Scanning Magnetoelectric Dipole Phased Array	95
<i>Zeting Li, Jianxing Li, Sifan Wu, Qinlong Li, Sen Yan, Juan Chen</i>	
Millimeter-Wave Filtenna Based on Double-Grating Rectangular Waveguide and Spoof Surface Plasmon Polaritons	98
<i>Yaxin Wen, Jianxing Li, Sifan Wu, Qinlong Li, Juan Chen</i>	
A 3D-Printed Ultra-Wideband High-Gain Horn Antenna Array Based on Phase Cancellation Method	101
<i>Xiaojuan Wang, Yujian Li, Junhong Wang</i>	
3-D Printed Dual-Band Dual-polarized Metalens Antenna	104
<i>Yilong Cai, Wenqiang Deng, Yuxuan Xie, Shuyan Zhu</i>	
High Linearity AlGaIn/GaN/Graded AlGaIn/GaN Double Channel HEMTs for High/Low Voltage Applications.....	107
<i>Qian Yu, Chunzhou Shi, Ling Yang, Meng Zhang, Hao Lu, Xu Zou, Bin Hou</i>	
Analysis on the Effective Dielectric Constant of COC-Based Particle-Doped Composites at Terahertz	110
<i>Zhenchuan Liang, Lei He, Haidong Chen, Quan Xue, Wenquan Che</i>	
Fluidically-Reconfigurable Multifunctional Metamaterial Integrated with Switching and Tuning Functions Based on Liquid Metal.....	113
<i>J. Tong, H. Li, Y. Feng, X. Wang, B. Sima, J. Hu, Z. Zong, W. Wu</i>	
Design of Polarization-Insensitive Multilayer Absorber for Ultra-Wideband RCS Reduction	116
<i>JinShan Deng, Junwei Wang, Hongwei Gao, Cheng Jin</i>	
A Novel Dielectric Honeycomb Structure for Broadband Traveling Wave Scattering Suppression	119
<i>Fan He, Nan Wu</i>	
Switchable 3D FSR with Low Profile and Wide Absorption Bands.....	122
<i>Yihao Wang, Shishan Qi, Wen Wu, Zhongxiang Shen</i>	
Design of the Electromagnetic Protection Element with Phase Modulation Ability	125
<i>Li Liu, Liang Chen, Junfeng Chen, Feng Deng</i>	
A Cryogenic Bandgap Reference Based on Vertical PNP Transistor for Quantum Computing	128
<i>Zhihui Tao, Lijun Xiao, Hao Zhou, Zhen Meng, Hua Chen</i>	
A 2-12GHz SiGe BiCMOS Cryogenic LNA with 6K Noise Temperature and 1.3mW DC Power	131
<i>Ruihong Wu, Cheng Wang</i>	
Design of a High-Peak-Power Ricker Pulse Generator Based on Power Synthesis Method.....	134
<i>Zheng Jiang, Wenjing Yuan, Jiyang Xie, Hongchun Yang</i>	
A Terahertz Pattern Reconfigurable Logarithmic Spiral Antenna with RF-MEMS Switches	137
<i>Zilai Wang, Jianming Huang, Naibo Zhang, Yansong Cui, Guangyao Yang, Ronghua Zhu</i>	
170 GHz Frequency Doubler Based on Schottky Diode	140
<i>Wei He, Xinyang Wang, Yuxuan Liu, Yu Cao, Wenqin Kuai, Weihua Yu</i>	

A Ku-Band Eight-Element Four-Beam Receive Beamformer Based on μm Bi-CMOS.....	143
<i>Zhuoheng Xie, Bo Huang, Shichao Jin, Lan Liu, Feng Yue, Run Yang, Su Yuan, Hongjiang Hang, Tianqi Yu, Xiulong Wu</i>	
Microassembly and Development for a Balanced Frequency Tripler.....	146
<i>Ruoxue Li, Yaoling Tian, Jun Jiang, Kun Huang, Yue He</i>	
A 94-GHz Down-Conversion Mixer with 15.8-dBm IIP ₃ Based on Multiple-Gate Transistor Structure	149
<i>Shaoxian Li, Junhong Liu, Guangyin Feng, Yanjie Wang</i>	
Single-Layered Push-Pull and Push-Push Oscillator with Asynchronous Sum and Difference Network.....	152
<i>Xiang Wang, Bo Tang, Huangyan Li, Jun Hu, Boyu Sima, Wen Wu</i>	
A 13.1-52.9-GHz VCO Based on Mode-Switching Quad-Core Oscillator in 40nm CMOS.....	155
<i>Zhe Yang, Rongbin Liu, Shaoxian Li, Guangyin Feng</i>	
25~32GHz Wideband Low Noise Amplifier Using 0.15 μm GaN-On-SiC Technology.....	158
<i>Da-yan Yuan, Cheng-xiang Duan, Wen-liang Liu, Huan-huan Jia, Yang Lu, Xiao-hua Ma, Yue Hao</i>	
A GaN HEMT Based MMIC Power Amplifier Covering 75–130 GHz.....	161
<i>Qin Ge, Bingfei Dou, Jing Liu, Xiaojiang Yao</i>	
Metamaterial-Filled Elliptical Patch Antenna Designed for the 5G Communications in China Covering 3.3-3.6GHz	164
<i>Jiale Lv, Bei Zhang, Xiaofei Xu</i>	
A Flexible Asymmetrically Ultra-Wideband Antenna Based on Silver Nanowires.....	167
<i>Yuntian Liu, Wuliang Xu, Hanlin Yang, Leilei Liu</i>	
A Wide Beam and Circularly Polarized Antenna with Parasitic Element.....	170
<i>Hao Li, Jianming Huang, Naibo Zhang, Yansong Cui, Ronghua Zhu</i>	
Generation of Orbital Angular Momentum Mode Groups by Partial Arc Array Antenna	173
<i>Shengyang Xu, Zhixia Wang, Zelin Zhu, Zhicheng Xiao, Xingqi Xuan, Xiaonan Hui, Shilie Zheng, Xianmin Zhang</i>	
Design and Optimization of Self-Calibration Method for Multi-Beam Phased Array Antenna with Large-Scale Apertur.....	176
<i>Nina Shan, Bo Zhou, Feng Gao, Haiyong Liu, Tiantian Xu, Shichao Jin</i>	
Simultaneous Transmit and Receive Based on Adaptive Digital Beamforming.....	179
<i>Hong Cao, Yong Bo, Quan Wang, Moupin Jin, Lixia Yang, JiaChen Wang</i>	
Transmission-Reflection Multifunctional 2-Bit Coding Metasurface with Multiple Beams.....	182
<i>Xiaobin Liu, Sijia Li, Huanhuan Yang, Tong Li, Kefeng Ji, Kun Gao, Zexu Guo, Zhiyun Zhang</i>	
Optically Controlled 2-Bit Reconfigurable Antenna in C-Band.....	185
<i>Jie Ming Lv, Zheng Xing Wang, Jun Wei Wu</i>	
Theoretical Analysis of Marginal Elements in Metal-Vivaldi Array Antennas	188
<i>Zhu Qingchao, Fang Jia, Zhang Xiaolin, Songyang Liu</i>	
A Reconfigurable Microstrip Antenna Based on Photoconductive Switches	191
<i>Ye Cheng Huang, Jun Wei Wu</i>	

A Ka-Band Phased Array Transceiver Based on Silicon Beamforming Chipsets for Communication and Radar Applications.....	194
<i>X. Xin, L. Wang, Y. F. Bi, Y. Wang, Q. P. Liu</i>	
Design of a 30-40 GHz Low-Noise Amplifier in 45 Nm SOI Technology.....	197
<i>Shuhuai Liao, Guanqin Guo, Hang Liu, Wenlong He</i>	
Intelligent Regulation of Ultra-Wideband Millimeter Wave Subassembly	200
<i>Tie Cheng Wu</i>	
Research on De-Embedding Algorithm Based on the Theory of Electromagnetic Field Transmission in Multi-Layer Medium.....	203
<i>Yixuan Zou, Lin Qin, Hu Zheng, En Li</i>	
A 0.4 Hz-335 MHz 130 dBΩ Transimpedance Amplifier with Tunable-Bias for MEMS Oscillators	206
<i>Yuting Huang, Peiyin Xu, Yifan Wu, Lijun Xiao, Zhen Meng, Hua Chen</i>	
Efficient and Simple Structured Five-Band Rectifier for Wireless Power Transfer	209
<i>Qifeng Gan, Hongji Li, Yinan Huang, Yejun He, Sai-Wai Wong</i>	
A Miniaturized Circularly Polarized Implantable Patch Antenna for Bio-Telemetry Applications.....	212
<i>Qimao Huang, Hua Li, Daibin Jing</i>	
Fundamental Trade-Off Between the Operating Frequency and Output Power Density in Linear-Mode Modulated SiC Photoconductive Switch.....	215
<i>Ye Wang, Xiaoli Lu, Xu Wang, Dan Wang, Haisheng Liu, Hanpeng Zhang, Min Xie, Xiaohua Ma, Yue Hao</i>	
6 GHz Lithium Niobate Lamb Wave Resonators with a High Quality Factor Implemented by Groove Structures.....	218
<i>Xin Tong, Yao Cai, Zhiwei Wen, Qinwen Xu, Wenjuan Liu, Yan Liu, Bo Woon Soon, Chengliang Sun</i>	
Design of a Reconfigurable Filtering Switch with Sharp Rejection and Wide Stopband.....	221
<i>Wang Chen, Zong-Rui Xu, Zhi-Yi Zhang, Lin-Sheng Wu, Jun-fa Mao</i>	
A Compact MEMS SP4T Switch Operating in the Wide Terahertz Band.....	224
<i>Guangyao Yang, Naibo Zhang, Zilai Wang, Kun Deng, Ning Liu, Ruiliang Song</i>	
Conical Relief Structures for Expanding Operating Bandwidth of Ferrite.....	227
<i>Wenchao Wang, Tianyang Chen, Jinbo Ruan, Junsheng Yu, Yuan Yao, Xiaodong Chen</i>	
A Nonlinear Multimode COM Model for TCSAW Analysis.....	230
<i>Xiaobin Wu, Hui Zhong, Bo Du, Hualei Wang</i>	
Effects of Coaxial Connector Deformation on Digital Signal Waveform.....	233
<i>Hafiz Muhammad Bilal, Jinchun Gao, Tianmeng Zhang, Chaoyi Wang, Junyu Luo</i>	
A Wideband Millimeter-Wave GaN Low-Noise Amplifier Using Multi-Stage Feedback Compensation.....	236
<i>Wei Huang, Xiaohu Fang, Wei Lin, Guanlong Huang, Xing Wang, Luyu Zhao</i>	
Dual-Polarized Reconfigurable MIMO Decoupled Antenna Design Using Characteristic Mode Analysis.....	239
<i>Xinhua Mao, Zhan Zhang, Junhong Wang</i>	

Phase and Amplitude Reconfigurable Transmissive Unit Cell Design at Sub-THz Frequencies	242
<i>Zaid Akram, Xie-Peng Chen, Xuyang Lu</i>	
A High-Resolution Hybrid Lens.....	245
<i>Jin Chen, Geng-Bo Wu, Ka Fai Chan, Chi-Hou Chan</i>	
An Optically Transparent Quasi-Nondiffractive Beams Antenna.....	247
<i>Yi Chen Zhong, ZhaoQiang Gao, Yongtao Jia, Jiaqi Zhu, Zhongxun Liu, Ying Liu</i>	
A Novel Dual-Polarization Meta-Atom for Both Radiation and 1-Bit Scattering Control	250
<i>Yue Teng Chen, Shi Sun, Hai Lin Wang, Hui Feng Ma</i>	
Leaky-Wave Coding Metasurface Antenna for Manipulating Far-Field and Near-Field Radiation	253
<i>Ye Chen, Ya Fei Wu, Yang Chai, Yu Jian Cheng</i>	
High-Stability Front-End Modules with Directional Filters for W-Band Imaging	257
<i>W. Li, C. Cui, Z. Li, Y. Zhang</i>	
Non-Planar Aperture MIMO Array Imaging	260
<i>Shiyong Li, Guoqiang Zhao, Houjun Sun</i>	
Concealed Object Detection Based on Wavelet Convolution for Millimeter Wave Image	263
<i>Weixian Tan, Yun Su, Yifan Dong, Wei Xu, Pingping Huang, Jianxin Zhang, Diankun Zhang</i>	
Dual Reconfigurable Cylindrical Reflectarray for Millimeter Wave Imaging.....	266
<i>Rike Jie, Shiyong Li, Shuoguang Wang, Guangnan Xing, Chunyang Teng</i>	
A Slot Antenna Array with Low Cross-Polarization Level Based on a Novel Substrate Integrated Coaxial Line Feeding Structure.....	269
<i>Shuhao Shen, Kang Zhou, Chunli Dong</i>	
A D-Band Substrate Integrated Waveguide Bandpass Filter Based on Silicon Carbide Technology	272
<i>Zhenghai Luo, Kang Zhou</i>	
Silicon-Based Integrated RF Filter with 3D Coupled Pole Based on Through-Silicon Via Technology	275
<i>Xiangyu Ma, Xiangkun Yin, Fengjuan Wang, Libo Qian, Qijun Lu, Zhangming Zhu</i>	
SIW Bandpass Filter Based on TGV Technology for Millimeter-Wave Wideband Communications.....	278
<i>Wenlei Li, Lingyue Wang, Jihua Zhang, Hongwei Chen, Libin Gao, Zhen Fang, Xingzhou Cao, Yong Li</i>	
A Wide Range Tunable Inductor Based on Magnetic Coupling Techniques for RF Communication	281
<i>Yanwen Zheng, Guangbao Shan, Guoliang Li</i>	
A Miniaturized T/R System in Wafer-Level 3D Package for the Application of Phased Array Antenna	284
<i>Shengchang Zhang, Guangbao Shan, Yi Luo, Xueying Liu</i>	
W-Band 2-D Multibeam Antenna Based on Rectangular Microcoaxial Lines	287
<i>Hao Wan, Guo-Qing Zhou, Jin Xu, Jiahao Zhao</i>	
Quasi-Coaxial Through-Silicon Via for Crosstalk Noise Suppression of 3D Integrated Microsystems.....	290
<i>Junkai Ma, Guangbao Shan, Guoliang Li</i>	

A Modified Space Mapping Algorithm-Aided Method for High-Performance LNA MMIC Design.....	293
<i>Zhuocheng Tian, Jingyuan Zhang, Xu Yan</i>	
The Application of Aggressive Space Mapping Algorithm in mmWave Power Amplifier Design	296
<i>Chenxi Ji, Jingyuan Zhang, Xu Yan</i>	
A Dual-Source SIE-PDE Formulation Without Boundary Condition Requirement for Electromagnetic Analysis	299
<i>Jiahui Zhao, Shunchuan Yang, Ming Bai</i>	
A Modified FEM Implementation for Stratified Medium Impinged by Horizontally Incident Plane Waves	302
<i>Huan Wang, Yuxian Zhang, Songlin Wei, Zhixiang Huang, Naixing Feng</i>	
Automatic Power Amplifier Design Based on DPSO and Reflection Model	305
<i>Jialong Zeng, Zhongjun Yu, Yuxin Ren, Cheng Tan</i>	
A Dual-Band 3-Bit Phase-Modulated Metasurface	308
<i>Jun Wei Zhang, Yanming Zhang, Ying Juan Lu, Wan Wan Cao, Yi Han Zhao, Hongjun He, Jun Yan Dai, Zhen Zhang, Qiang Cheng</i>	
A Fast Method to Evaluate the Temperature Rise in Meta Material Radome.....	311
<i>Qiang Zhang, Hongbing Sun, Hao Zhou, Lei Sun, Zhao Li, Shouzhu Tang, Lichao Wang, Yang Li</i>	
A Low-Phase-Noise Voltage Controlled Oscillator with Tuning Bandwidth of 25% Using Stacked- FET Approaches for Enhanced Output Power.....	314
<i>Wen-liang Liu, Zi-yue Zhao, Jiu-ding Zhou, Yang Lu, Jing-ya Deng, Xiao-hua Ma, Yue Hao</i>	
A 19.19-43.6 GHz Quad-Mode VCO with Even-Mode Magnetically Coupled Capacitors	317
<i>Xiaozhe Jia, Wuwei Zhou, Jie Cui, Lei Chen</i>	
A 21–27 GHz LNA-Mixer in a 180 nm SiGe BiCMOS Process.....	320
<i>Yuxiang Zhou, Chong Han, Xuyang Lu</i>	
Hybrid Stub-Loaded Resonators for Millimeter Wave Broadband Microstrip-to-Microstrip Vertical Transition in Multilayer LCP Substrate	323
<i>Weihong Liu, Xinze Su, Xu Zhang, Dongyang Guan</i>	
Long-Range Reading Compact Antenna for Antimental UHF RFID Tag	326
<i>Liang-Peng Hong, Jian Wang, Hao Zhang</i>	
Design of a 1-Bit Reconfigurable Low-Profile UWB Antenna Element.....	329
<i>Zuqi Fang, Chenyan Lu</i>	
A Method of Reducing Mutual Coupling by Suppressing Non-Working Modes Using Characteristic Mode Analysis.....	331
<i>Wei Si, Guodong Han</i>	
W-Band Wideband CMOS to Rectangular Waveguide Integrated Transmitter	334
<i>Yuqiang Peng, Yan Li, Tao Feng, Minghua Zhao</i>	
A Novel 1-Bit Phased Array Antenna Based on Fixed Prephased Feeding Network	337
<i>Xiaohe Cheng, Zhiyan Liu, Yuan Yao</i>	
Miniaturized Copper-Based LTCC Filter	340
<i>Shicheng Yang, Neng Zhang, Yulong Du, Meijuan Xu, Shanze Li, Zhuo Lin</i>	

Polynomial Chaos-Based Yield Estimation for Low-Pass Elliptic Microstrip Filter.....	343
<i>Yuying Liu, Wei Zhang, Zhiguo Zhang, Feng Feng</i>	
Improvement of Copper-Based LTCC Via Protrusion.....	346
<i>Xuzhou Jia, Shicheng Yang, Meijuan Xu, Feng Wang, Shanze Li, Tingting Wang</i>	
A Bend-Insensitive Hollow Anti-Resonant Fiber Design with Ultralow Loss	349
<i>YiPeng Lu, Haojie Zhang, Tong Zhai, Rui Zhou, Zhiguo Zhang</i>	
Suppression of Differential-To-Common-Mode Conversion on Bent Differential Lines Using Spoof Surface Plasmon Polaritons.....	352
<i>Hao Yang, Xiaohe Cheng, Yuan Yao</i>	
Beamwidth Enhancement Resonator Antenna for Wide-Angle Scanning Phased Array.....	355
<i>Qiang Sun, Quanyuan Feng, Yong-Ling Ban</i>	
Polarization Sensitive Fishbone Metasurface with Spatial Wave Selectivity and Convergence	358
<i>Mengzhen Wang, Ruizhi Liu, Zhian Deng, Weijian Si, Ke Wu</i>	
A Ku/Ka-Band Wideband High Gain Shared-Aperture VICTS Antenna Array	361
<i>Xu Peng Gu, Hong Bin Wang, Yu Jian Cheng</i>	
A Wideband Millimeter-Wave Endfire Antenna Fed by Substrate Integrated Coaxial Line.....	364
<i>Yafei Shi, Yingrui Yu, Ziqing Chu, Wen Wu</i>	
Ultrathin Multifunctional Transmission-Reflection Integrated Metasurface.....	367
<i>Yuanqing Huang, Chong He, Weiren Zhu</i>	
A Circularly Polarized Magnetolectric Dipole Antenna and Its Gain Enhancement	370
<i>Bo-Han Jiang, Shi-Feng Nie, Zihan Lin, Qing-Yi Guo, Wenlong He</i>	
A Low-Scattering Microwave Antenna with Reconfigurable Frequency Band.....	373
<i>Ying Zhu, Weixu Yang, Ke Chen, Junming Zhao, Yijun Feng</i>	
A Polarization Rotating Reflection Unit and Its Application in Folded Transmission Arrays.....	376
<i>X. Y. Zhang, P. F. Gu, Z. H. Cao, D. W. Song, J. X. Wang, Z. H. Fan, D. Z. Ding</i>	
A Planar Metallic Folded Reflectarray	379
<i>Qiqi Zhou, Lu Guo</i>	
An Ultra-Wide-Scanning-Angle Array Based on a Miniatured Wide-Beam Antenna.....	382
<i>Jia-Qi Zhang, Yang-Ling Ban</i>	
2-D Frequency Scanning Leaky-Wave Antenna Array Based on Substrate Integrated Waveguide Structure	384
<i>Xingyu Pang, Yunjie Geng, Junhong Wang</i>	
A Half-Mode Substrate Integrated Waveguide Leaky-Wave Antenna with Capability of Four-Beam Switching at Fixed Frequency	387
<i>Wei Zheng, Xiaowen Li, Yunjie Geng, Junhong Wang</i>	
A Submillimeter-Wave Reconfigurable Flat Lens Antenna Using Phase-Change Material	390
<i>Guang-Hua Sun, Kai Xu Wang, Liang Wei Qin</i>	
A Wideband Circularly Polarized Filtering Antenna Based on Stacked Patch Structure.....	393
<i>Jian Zhou, Guangshang Cheng, Lixia Yang, Zhixiang Huang</i>	

Modeling and Analysis of Electrical Characteristics of Symmetric Double Gate HEMT	396
<i>Ruicong Yuan, Lin Wang</i>	
The TCAD Simulation Study of m-GaN Based HEMTs by Using ϵ -Ga ₂ O ₃ as Barriers for High Frequency Application.....	399
<i>Tao Guo, Chang Wu, Jielong Liu, Kai Wang, Jiayan Wu, Yulei Zeng, Xin Xiong, Tao Zhang, Yu Wang</i>	
Influence of Upper Channel Layer Thickness on Traps in Double-Channel InAlN/GaN HEMTs.....	402
<i>Si-Yin Guo, Qing Zhu, Yi-Lin Chen, Meng Zhang, Min-Han Mi, Jie-Jie Zhu, Xiao-Hua Ma</i>	
A R-T-R FSS Structure with Dual-Polarization and High Selectivity in C-Band and X-Band for Radome.....	405
<i>Yuchao Zheng, Kaiqiang Zhu, Houjun Sun</i>	
All-GaAs Broadband Terahertz Absorber Based on Deep Etched High-Aspect-Ratio Metamaterials.....	408
<i>Ziqi Mei, Lingyun Zhang, Yucheng Xu, Rongbo Xie, Chaoqing Guo, Chao Liang, Wenqiang Zhang, Kebin Fan, Zheng You, Xiaoguang Zhao</i>	
Tapered Periodic Sheet Design for Edge Scattering Suppression.....	411
<i>Gengjiang Yao, Lijie Chen, Fan He, Zhaowang Cao, Ze Huang, Haoran Li</i>	
A Wideband Filter Based on Shielded QMSIW Loading Complementary Split Ring Resonators.....	414
<i>Nuo Liu, Xiaoxian Liu, Chenhui Fan, Zhangming Zhu</i>	
A Dual-Core Triple-Mode VCO with Magnetic Coupling Resonance Boosting for 5G Wideband Transceivers.....	417
<i>Shuai Deng, Xiang Yi, Taotao Xu, Quan Xue</i>	
A Low-Phase-Noise Harmonic-Shaping Oscillator in 40-nm CMOS Technology.....	420
<i>Le Cao, Yuxin Yang, Sheng Huang, Yong Tian, Chunxu Mao, Xiang Yi, Wenquan Che, Quan Xue</i>	
Investigation of a Cryogenic RF-MEMS Filter for Quantum Bit State Controller.....	423
<i>Lijun Xiao, Huazi Huang, Zhihui Tao, Zhen Meng, Hua Chen</i>	
A Cryo-CMOS 20-Bit R-2R Ladder DAC for the Manipulation of Silicon and Carbon Nanotube Qubits	426
<i>Yingjie Li, Yan Xu, Cheng Wang</i>	
A Miniaturized Tile-Type T/R Module with Four Channels in Ka Band.....	429
<i>Zhigang Zhang, Ming Sun, Ting Xue, Hongtao Li, Koushan Xu</i>	
Study on the Influence of Fin Width on the Characteristics of T-Gate Fin HEMT.....	432
<i>Kai Wang, Chang Wu, Jielong Liu, Tao Guo, Shaokun Xing, Yulei Zeng, Yu Wang, Tao Zhang, Xin Xiong, Chengcheng Li, An Liu, Rui Zhou, Jiayan Wu, Zhen Huang</i>	
A Cryogenic Low Phase Noise MEMS Oscillator Based on 433 MHz SAW Resonator	435
<i>Hao Zhou, Huazi Huang, Lijun Xiao, Zhen Meng, Hua Chen</i>	
A 2.6-GHz-Band High Power GaN Doherty Power Amplifier Based on GaAs Integrated Passive Devices	438
<i>Wei Dai, Shuai Luo, Qingzhi Wu, Ruimin Xu, Bo Yan, Chang Wu, Yucheng Xu</i>	
A Compact H-Plane Ten-Way Waveguide Power Divider.....	441
<i>Jingxian Yang, Meng Yang, Junfeng Chen</i>	

A High-Efficiency and Compact Power Amplifier with Harmonic Suppression.....	444
<i>Jiahua Li, Ting Feng</i>	
A Highly-Selective Planar Hybrid Filter Based on Dual-Mode SIW Loaded by Stripline Resonator.....	447
<i>Sen Sen Ma, Xue Hui Hu, Chun Feng Fan, Jin Tu Sun, Yan Liu, Qing Liu, Ke Gong</i>	
A High Gain Broadband LNA with Gate-Enhanced Triple-Coupled Transformer Feedforward Gm-Boosting Technique	450
<i>Wuwei Zhou, Xiaozhe Jia, Jie Cui, Lei Chen</i>	
A New Triple-Frequency Impedance Transformer Using Different Kinds of Parallel Stubs	453
<i>Jinchao Xu, Xinhuai Wang</i>	
A Low-Cost, E-Band Surface Mounted Packaged Power Amplifier MMIC	456
<i>Nan Guo, Zhenbei Li, Jian Zhang</i>	
A High Linearity Power Amplifier with Supplier Sharing Supporting 4096 QAM 802.11be Application	459
<i>Ruiyuan Chen, Wuwei Zhou, Jie Cui, Lei Chen</i>	
A Compact Eighth-Mode SIW (EMSIW) Filter with Hybrid Coupling Based on TSV Technology	462
<i>Chenhui Fan, Xiaoxian Liu, Zhangming Zhu, Yang Liu</i>	
A Design for Improving Antenna Gain Based on Frequency Selective Surface.....	465
<i>Xurui Zhang, Haoran Ye, Yan Zhang, Bingchen Bai, Tao Hong</i>	
A Method for Improving the Cross-Polarization Ratio of Low Profile $\pm 45^\circ$ Dual-Polarized Transmit Array Antennas.....	468
<i>Chenyan Lu, Zuqi Fang</i>	
W-Band Magnetolectric Dipole Phased Array Antenna Based on the TGV Technology	471
<i>Hong Bin Hu, Ding Wang, Yong Fan, Yu Jian Cheng</i>	
Dual-Band Dual-Polarization Cavity-Backed Slot Filtering Antenna with Double Radiation Directions	474
<i>Shu-Qing Zhang, Hongji Li, Sai-Wai Wong</i>	
A L/S Dual-Band Circular Polarization Phased Array Antenna Used for Satellite Communication	477
<i>Sijie Wang, Lei Wang, Zhen Chen, Haomiao Xie</i>	
A High Gain Conical Pattern Antenna for Millimeter Wave Fuze Applications.....	480
<i>Zhiqiang Zhao</i>	
A Millimeter Wave Fuze TX/RX Antenna Pair with Enhanced Coverage	483
<i>Shengji Deng, Jiangtao Ji</i>	
A Review of Miniaturization Technology for High-Gain Antennas	486
<i>Weiwen Lu, Song Xiao, Jie Wu</i>	
A Design of Sub-THz Band Linearizer Toward 6G.....	489
<i>Yasunori Suzuki</i>	
A Low-Noise Frequency-agile Ku-band Frequency Synthesizer for Wideband Frequency Hopping Communication System.....	492
<i>Ding Luo, Huaizong Shao, Xueyong Zhu, Yuanwang Yang</i>	

A Millimeter-Wave Integrated Feeding Structure for 3-D-Printed Multibeam Luneburg Lens.....	495
<i>Xinhui Yu, Yujian Li, Yujiao Guo, Junhong Wang</i>	
The Full D-Band InP HEMT Low Noise Amplifiers MMIC with 2.7dB Noise Factor.....	498
<i>Luwei Qi, Weibo Wang, Zhongfei Chen, Yuan Sun, Yan Chen, Fan Yang</i>	
Loaded N-Port Structure for Reconfigurable Compact MIMO Antenna Design Invited Paper	501
<i>Zixiang Han, Sen Wang, Jing Jin, Qixing Wang, Shanpu Shen, Ross Murch</i>	
Multiport Pixel Antenna Optimization Using N-Port Characteristic Mode Analysis	504
<i>Fan Jiang, Lu-Lu Chen, Liang-Hua Ye, Duo-Long Wu</i>	
Rigid-Flexible Pattern Reconfigurable Antenna Using Modular Elements for L-Band Space Applications.....	507
<i>Gong Chen, Peizhuo Yang, Fujiang Lin, Koen Mouthaan</i>	
Spin-Decoupled Polarization-Preserving Transmit-Array Antenna for Mm-Wave Wireless Systems	510
<i>Jianfeng Zhu, Shaowei Liao, Wenquan Che, Quan Xue, Yang Yang</i>	
A Compact Filtering Dielectric Resonator Antenna with Circular Polarization by Rectangular Patch	512
<i>An-Zhi Wang, Liang-Yong Yi, Li Zhang, Dian Liu</i>	
An Eight-Element MIMO Antenna Covering All the 4G LTE and 5G NR Bands with a 0.5 Mm Clearance for Metal-Bezel Mobile Phones.....	515
<i>Wangxian Zhao, Yan Wang, Yue Shi</i>	
Wideband Four-Port 3-D Interconnection Based on SIW for Multi-Port Connection.....	518
<i>Haoran Ye, Xurui Zhang, Yan Zhang, Bingchen Bai, Rongke Liu</i>	
Wideband M-Shaped Beamforming Antenna Array Design for a 77 GHz BPM-MIMO Automotive Corner Radar	522
<i>Shanwen Luo, Jinghu Sun, Li Huang, Yuanyuan Zhang, Di Zeng</i>	
A W-Band Wideband Via-Holes Transition Design Based on Multilayer LCP Substrate	525
<i>Weihong Liu, Zi Yang, Ye Liu, Duan Xie</i>	
Prior-Knowledge-Guided Structural Optimization Method for Microwave Component Design	528
<i>Peng-Fei Qin, Wen-Hao Li, Guan-Long Huang</i>	
Low-Cost Machine-Learning-Assisted Microwave Component Structural Modelling Method.....	531
<i>Wen-Hao Li, Peng-Fei Qin, Guan-Long Huang</i>	
Elliptical Gaussian Beam Decomposition Using Multi-Layer Perceptron Network	534
<i>Chuan Shi, Lei Zhao, Junpeng Shi, Jiahui Zhao, Shiyuan Zhang, Ming Bai</i>	
Electro-Thermal Simulation Analysis of Low Noise Amplifier System Level.....	537
<i>Kang-Min Sun, Jian Wang, Xu-Feng Lou</i>	
Highly Conductive Graphene Film Based Dual-Band 1-Bit Low-RCS Coded Metasurface	540
<i>Zhifeng Li, Rongguo Song, Haoran Zu, Daping He</i>	
Transparent and Flexible Microwave Absorber with Independent Frequency and Amplitude Modulations.....	543
<i>Ming-Yang Geng, Hao Chen, Zhen-Guo Liu, Wei-Bing Lu</i>	
Design of a 2-Bit Metal-Graphene Hybrid Reconfigurable Reflectarray at THz Frequencies	545
<i>Jiankai Sun, Bian Wu</i>	

Multi-Layer Frequency Selective Resorber with Wide Bandwidth Using 8-shaped Resonators.....	548
<i>Xiaoyu Pang, Weixi Xu, Zhiqiang Yang, Bian Wu</i>	
Dynamically Tunable Beam Scanning Wearable Antenna Based on Graphene	551
<i>Zhi-Peng Chen, Ming-Yang Geng, Meng-Zi Li, Zhen-Guo Liu, Wei-Bing Lu</i>	
Low-Profile Windows Resonating Cavity Bandpass Filter with Quasi-Elliptic Response.....	554
<i>Ying-Qian He, Hongji Li, Sai-Wai Wong</i>	
A Modified Coaxial Low-Pass Filter with Miniaturized Size and Broad Stopband Using Loading Dielectric Substrates Technology	557
<i>Zhi-Chong Zhang, Kai-Xuan Xiao</i>	
High-Efficiency Cavity-Backed Filtering Slot Antenna Array with Simplified Feeding Structure	560
<i>Zhi-Cai Liao, Rui-Sen Chen, Qiang Shao, Sai-Wai Wong, Fu-Chang Chen</i>	
Design of Miniaturized Ceramic Waveguide Filter Utilizing a Three-Blind-Hole Structure	563
<i>Yang Gao, Yunxiu Wang, Xiaotao Yao, Guangyong Wei, Jie Liu</i>	
Pattern Reconfigurable Antenna Employing Liquid Metal	566
<i>Zhishu Qu, Xiaochuan Fang, James R. Kelly, Yue Gao</i>	
Design of a Tri-Band MIMO Antenna with High Isolation for Coal Mine Wireless Communication	569
<i>Peipei Dong, Yanhong Xu, Nanyue Li, Shanshan Li</i>	
A Circularly Polarized Reconfigurable Antenna with a Simple $\pm 45^\circ$ Harpoon-Shaped Feeding Microstrip Line.....	572
<i>Rui Cheng, Xue Ren</i>	
Dual Band Common Aperture OAM Vortex Wave Antenna Based on Reflective Metasurface	575
<i>Yixuan Wang, Zhaoneng Jiang, Jiquan Qi, Hui Liang</i>	
Low Profile Dipole Antenna Based on AMC and FSS.....	578
<i>Jiquan Qi, Yixuan Wang, Zhaoneng Jiang</i>	
Efficient Dual Band Rectenna Without Matching Network for Wireless Energy Harvesting	581
<i>Chun-Hong Du, Fei Cheng, Huai-Yu Wang</i>	
A Novel Liquid-Filling Based Beam-Steering Technology for a Waveguide Slot Array Antenna	584
<i>Linxiang Shao, Minghe Du, Shuai Li, Haoyun Yuan, Meng Zhang, Lili Fang, Jianjun Ma, Liming Si, Houjun Sun, Xiue Bao</i>	
A Terahertz Broadband Tripler Using Schottky Diode and Monolithic Integrated Technology.....	587
<i>Dongfeng Ji, Dongshuang Wang, Kunpeng Dai, Weibo Wang, Xuming Yu</i>	
220-330-GHz Ultrawideband 90° Waveguide Twist Based on Three-Step Monoblock.....	590
<i>Shuhan Xu, Yinian Feng, Bo Zhang</i>	
A Novel M-Type Communication Coil Antenna in Near Field Simultaneous Wireless Power and Data Transfer System	593
<i>Longchuan Liu, Qianyin Xiang, Hongbo Ma, Quanyuan Feng</i>	
Dual-Channel Models for Polarization-Insensitive & High-Isolation Microwave Power and Data Delivery	596
<i>Y. X. Deng, H. D. Li, C. Gao, H. Zhang</i>	

Power Communication Network Traffic Monitoring Based on Multi-Scale Convolutional Neural Networks	599
<i>Ziyan Zhao, Bozhong Li, Dequan Gao, Zifan Li, Jia Yu, Xiannan Luo</i>	
Wideband Compact Vivaldi Antenna for Millimeter-Wave Applications.....	602
<i>Menghuan Han, Yingrui Yu, Ziqing Chu, Zuping Qian, Wen Wu</i>	
Modeling Method of Active Metasurface Based on Artificial Neural Network and Microwave Network.....	605
<i>Junhui Qiu, Zhaoyu Huang, Zhen Zhang, Dong Tang</i>	
Ultra-Wideband Power Dividers for Emerging Beamforming System	608
<i>Z.Z. Xu, Y. F. Pan, Y. Yang</i>	
Design of Low Loss Radio Frequency Switch Device Based on Double-Channel InAlN/GaN HEMT.....	611
<i>Xu Zou, Meng Zhang, Qian Yu, Yilin Chen, Ling Yang</i>	
Optically Transparent CP Coding Metasurface for Low Backscattering and RCS Reduction	614
<i>Mustafa K. Taher Al-Nuaimi, William G. Whittow, Guan-Long Huang, Rui-Sen Chen</i>	
2D/3D Heterojunction for Highly Efficient Tin-Lead Alloyed Perovskite Solar Cells	616
<i>Ting Zhang, Tianyu Lan, Fei Xie, Bofeng Yang, Jian Li, Shibin Li</i>	
A 4.2-5.8GHz Noise Circulating LC Oscillator with Implicit Common-Mode Resonance.....	619
<i>Jin Feng, Haoshen Zhu, Pei Qin, Wenquan Che, Quan Xue</i>	
An External Cap-Less LDO with Low Noise and High Power Supply Rejection.....	622
<i>Yuanzhao Xiao, Pei Qin, Xiang Yi, Wenquan Che, Quan Xue</i>	
Systematic Design of Substrate Integrated Waveguide TE ₁₀ -TE _{N0} -Mode Converter	625
<i>Gan Wang, Heng Zang, Zihao Dong, Xiaomao Zhu, Yan Zhang</i>	
Design of a High-Selectivity Frequency Selective Surface Based on SIW Technology	628
<i>Linchuan Yang, Dongfang Zhou, Dewei Zhang, Xian Wang, Hang Qian</i>	
A Reconfigurable K-Band GaN Power Amplifier	631
<i>Zhikai Hu, Dingyuan Zeng, Zongqi Cai, Haoshen Zhu, Wenquan Che, Quan Xue</i>	
Silicon Bridge for High-Level RF Microsystem Package and Mixed Signals Transmission	634
<i>Xiaodong Yang, Xiangyu Sun, Yaobing Lu</i>	
Microfabrication of Air-Filled Rectangular Waveguide Using Dry Film as Sacrificial Layer	636
<i>Jian-Bin Wu, Lin-Sheng Wu, Jun-Fa Mao</i>	
Miniaturized Microstrip Antenna Designed by Loading Dual Intersected F-Slots.....	639
<i>Hu Wei, Xiaofei Xu</i>	
Design of a Symmetrical T-Slot Antenna Array for 5G mmWave Bands.....	642
<i>Mingxiang Wu, Yanzhong Yu, Qiao Wang</i>	
S-Band Metal Cavity-Backed Electronically-Scanning Antenna	644
<i>Q.C. Zhang</i>	
A Millimeter-Wave Antenna-on-Display Design with Two Polarization Modes for 5G Mobile Devices	646
<i>Rui Ying Zhang, Kun Yang, Yu Jian Cheng</i>	

A 512-Element K-Band Receive Phased Array with Dual-Circularly-Polarization for SATCOM Application	649
<i>Feng Gao, Yuqian Yang, Shichao Jin, Zhe Cui, Jing Wang, Haiyong Liu, Chenyu Mei, Nina Shan, Chunyan Yang</i>	
Millimeter-Wave Wideband Circularly Polarized Magnetic-Electric Dipole Antenna for Endfire Radiation	652
<i>Hengfei Xu, Boyu Sima, Pu Wei, Lei Tang, Shu Jiang, Chuanqing Liu</i>	
High Density Feed Network Arrangement for E-Band Dual-Polarized Antenna Array	655
<i>Shaoqian Liu, Yan Zhang, Jinjing Zhao, Siyuan Liu, Yongjun Xie, Shanwei Lü, Guangjian Wang, Guolong Huang</i>	
Design of a Low-Sidelobe Millimeter-Wave Microstrip Array Antenna	658
<i>Jing Wang, Shichao Jin, Dunge Liu, Yuqian Yang, Tianfu Chen, Chunjiao Fei, Chenyu Mei, Bo Zhou, Jun Huang, Lipeng Liu, Jinhuai Su, Chenyu Wang, Jiaying Sun</i>	
Compact Ultrawide-Beam Antenna Array Using Novel Series Feeding Network	661
<i>Yinbo Zhao, Zengdi Bao, Yang Li</i>	
Design of Miniaturized Ultra-Wideband Vivaldi Antenna	664
<i>Xiaoming Yan, Zhe Chen, Xianqi Lin, Jie Gu, Jingfei Jiang</i>	
A Sparse Conformal Multi-Faceted Array Based on Pyramid/Trapezoid Subarrays	667
<i>Li Qi Yan, Yu Jian Cheng</i>	
Design of UWB Electrically Small Antenna Based on Active Matching Network	670
<i>Jinfeng Han, Zhe Chen, Xianqi Lin, Jie Gu, Guo Liu</i>	
A High-Efficiency Slotted Waveguide Antenna Based on Higher-Order Mode Cavity	673
<i>Wu-Guang Zhao, Wenhao Dai, Jingxue Wang, Ling Tian, Fan Wu</i>	
Research on Radar Target Coalescence Method Based on FPGA Platform	676
<i>Ailing Liu, Hao Wang, Wenwen Xu, Dalong Xu, Jianyin Cao</i>	
Research and Implementation of Radar Signal Processing Algorithm for FPGA-Based DBF System	679
<i>Shuqiong Chen, Wenwen Xu, Dalong Xu, Hao Wang, Jianyin Cao</i>	
Design of a 0.7GHz to 3GHz High-Linearity Drive Amplifier	682
<i>Aqiang Xie, Xiaoguo Huang, Xinhuai Wang</i>	

Author Index